#3

SEQUENCE LISTING

<110> Lyamichev, Victor   Allawi, Hatim   Dong, Fang   Neri, Bruce
Vener, Tatiana

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<140>   Not yet assigned

<141>   2001-06-15

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cccgctgtcg gggttgaccc acaagcgccg actgtcggcg ctggggcccg gcgg   114

<210> 89 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 89
gcgccgggcc ccagcgccga   20

<210> 90 <211> 114 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 90
cgccgcgatc aaggagttct tcggcaccag ccagctgagc caattcatgg accagaacaa   60

cccgctgtcg gggttgaccc acaagcgccg actgtcggcg ctggggcccg gcgc   114

<210> 91 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 91
cggccgggcc ccagcgccga   20

<210> 92 <211> 114 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 92
cgccgcgatc aaggagttct tcggcaccag ccagctgagc caattcatgg accagaacaa   60

cccgctgtcg gggttgaccc acaagcgccg actgtcggcg ctggggcccg gccg   114

<210> 93 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 93
cgggccccag cgccgaca   18

<210> 94 <211> 110 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 94
cgccgcgatc aaggagttct tcggcaccag ccagctgagc caattcatgg accagaacaa   60

cccgctgtcg gggttgaccc acaagcgccg actgtcggcg ctggggcccg   110

<210> 95 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 95
agggccccag cgccgaca   18

<210> 96 <211> 110 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 96
cgccgcgatc aaggagttct tcggcaccag ccagctgagc caattcatgg accagaacaa   60

cccgctgtcg gggttgaccc acaagcgccg actgtcggcg ctggggccct   110

<210> 97 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 97
ccccagcgcc gacagtcg   18

<210> 98 <211> 106 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 98
cgccgcgatc aaggagttct tcggcaccag ccagctgagc caattcatgg accagaacaa   60

cccgctgtcg gggttgaccc acaagcgccg actgtcggcg ctgggg   106

<210> 99 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 99
tcccagcgcc gacagtcg   18

<210> 100 <211> 106 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 100
cgccgcgatc aaggagttct tcggcaccag ccagctgagc caattcatgg accagaacaa   60

cccgctgtcg gggttgaccc acaagcgccg actgtcggcg ctggga   106

<210> 101 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 101
cgcttgtggg tcaaccccga   20

<210> 102 <211> 87 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 102
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cccgctgtcg gggttgaccc acaagcg   87

<210> 103 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 103
agcttgtggg tcaaccccga   20

<210> 104 <211> 87 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 104
cgccgcgatc aaggagttct tcggcaccag ccagctgagc caattcatgg accagaacaa   60

cccgctgtcg gggttgaccc acaagct   87

<210> 105 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 105
gtgacagagt tgttct   16

<210> 106 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 106
gtgacagatt gttgttct   18

<210> 107 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 107
gtgacagagc gttgttct   18

<210> 108 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 108
gtgacagaaa gttgttct   18

<210> 109 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (9)..(10) <223> The residues at these
positions are spacers with abasic sugar lab
      els.

 <400> 109
gtgacagann gttgttct   18

<210> 110 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 110
tcacgtgagc gtccatga   18

<210> 111 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 111
cagaccgcgc acagcggg   18

<210> 112 <211> 17 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 112
gctcacgata ccccgac   17

<210> 113 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 113
tgctcacgat accccgac   18

<210> 114 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 114
cgccgggcgc tcaacccc   18

<210> 115 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 115
acagtcgggc ggttgttc   18

<210> 116 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 116
cgggccccta tgtgggtc   18

<210> 117 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 117
ctcacgtgta tctggtcc   18

<210> 118 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 118
tgacagacgt tgttct   16

<210> 119 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 119
ccccagcggc gttgttct   18

<210> 120 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 120
gtgtcgtttg gaaccg   16

<210> 121 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 121
tgggcgttgc ttgtgg   16

<210> 122 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 122
ttgggcgttg cttgtggt   18

<210> 123 <211> 13 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 123
tccttgatcg cgg   13

<210> 124 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 124
cttaaggtag gactac   16

<210> 125 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 125
cattttccaa ccttaa   16

<210> 126 <211> 14 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 126
taaggtagga ctac   14

<210> 127 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(16) <223> The residue at this
position can be any nucleotide.

 <400> 127
taaggtagga ctacnn   16

<210> 128 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(18) <223> The residue at this
position can be any nucleotide.

 <400> 128
taaggtagga ctacnnnn   18

<210> 129 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(20) <223> The residue at this
position can -be any nucleotide.

 <400> 129
taaggtagga ctacnnnnnn   20

<210> 130 <211> 22 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(22) <223> The residue at this
position can be any nucleotide.

 <400> 130
taaggtagga ctacnnnnnn nn   22

<210> 131 <211> 24 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(24) <223> The residue at this position can be any nucleotide.

<400> 131
taaggtagga ctacnnnnnn nnnn   24

<210> 132 <211> 26 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(26) <223> The residue at this position can be any nucleotide.

<400> 132
taaggtagga ctacnnnnnn nnnnnn   26

<210> 133 <211> 30 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(30) <223> The residue at this position can be any nucleotide.

<400> 133
taaggtagga ctacnnnnnn nnnnnnnnnn   30

<210> 134 <211> 14 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 134
ttttccaacc ttaa   14

<210> 135 <211> 22 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(22) <223> The residue at this position can be any nucleotide.

<400> 135
ttttccaacc ttaannnnnn nn   22

<210> 136 <211> 26 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(26) <223> The residue at this position can be any nucleotide.

<400> 136
ttttccaacc ttaannnnnn nnnnnn   26

<210> 137 <211> 14 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (1)..(14) <223> The residues in these positions are 2'-O-methyl nucleotides.

<400> 137
gtagtcctac ctta   14

<210> 138 <211> 14 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (1)..(14) <223> The residues in these positions are 2'-O-methyl nucleotides.

<400> 138
ttaaggttgg aaaa   14

<210> 139 <211> 24 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (15)..(24) <223> The residue at this position can be any nucleotide.

<400> 139
ttttccaacc ttaannnnnn nnnn   24

<210> 140 <211> 21 <212> DNA <213> Artificial <220> <223> Synthetic

<220> <221> misc_feature <222> (1)..(1) <223> The residue at this 5' end has a tetrachlorofluorescein label.

<400> 140
ngcatcgttt tgggttctct t   21

<210> 141 <211> 987 <212> RNA <213> Artificial <220> <223> Synthetic

<400> 141
cacauuguuc ugaucaucug aagaucagcu auuagaagag aaagaucagu uaaguccuuu   60

ggaccugauc agcuugauac aagaacuacu gauuucaacu ucuuuggcuu aauucucucg   120

gaaacgauga aauauacaag uuauaucuug gcuuuucagc ucugcaucgu uuuggguucu   180

cuuggcuguu acugccagga cccauaugua caagaagcag aaaaccuuaa gaaauauuuu   240

aaugcagguc auucagaugu agcggauaau ggaacucuuu ucuuaggcau uuugaagaau   300

uggaaagagg agagugacag aaaaauaaug cagagccaaa uugucuccuu uuacuucaaa   360

cuuuuuaaaa acuuuaaaga ugaccagagc auccaaaaga guguggagac caucaaggaa   420

gacaugaaug ucaaguuuuu caauagcaac aaaaagaaac gagaugacuu cgaaaagcug   480

acuaauuauu cgguaacuga cuugaauguc caacgcaaag caauacauga acucauccaa   540

gugauggcug aacugucgcc agcagcuaaa acagggaagc gaaaaaggag ucagaugcug   600

uuucgagguc gaagagcauc ccaguaaugg uuguccugcc uacaauauuu gaauuuuaaa   660

ucuaaaucua uuuauuaaua uuuaacauua uuuauauggg gaauauauuu uuagacucau   720

caaucaaaua aguauuuaua auagcaacuu uuguguaaug aaaaugaaua ucuauuaaua   780

uauguauuau uuauaauucc uauauccugu gacugucuca cuuaauccuu uguuuucuga   840

cuaauuaggc aaggcuaugu gauuacaagg cuuuaucuca ggggccaacu aggcagccaa   900

ccuaagcaag aucccauggg uugugugguu auuucacuug augauacaau gaacacuuau   960

aagugaagug auacuaucca guuacua   987

<210> 142 <211> 47 <212> RNA <213> Artificial <220> <223> Synthetic

<400> 142
ggugguggug ggcgccgucg guguggcaa gagugcgcug accaucc   47

<210> 143 <211> 589 <212> RNA <213> Oryctolagus cuniculus

<400> 143
acacuugcuu uugacacaac uguguuuacu ugcaaucccc caaaacagac agaauggugc   60

aucuguccag ugaggagaag ucugcgguca cugcccugug gggcaaggug aauguggaag   120

aaguuggugg ugaggcccug ggcaggcugc ugguugucua cccauggacc cagagguucu   180

ucgaguccuu ugggggaccug uccucugcaa augcuguuau gaacaauccu aaggugaagg   240

cucauggcaa gaaggugcug gcugccuuca gugagggucu gagucaccug gacaaccuca   300

aaggcaccuu ugcuaagcug agugaacugc acugugacaa gcugcacgug gauccugaga   360

acuucaggcu ccugggcaac gugcugguua uugugcuguc ucaucauuuu ggcaaagaau   420

ucacuccuca ggugcaggcu gccuaucaga aggugguggc uggugugggcc aaugcccugg   480

cucacaaaua ccacugagau cuuuuucccu cugccaaaaa uuauggggac aucaugaagc   540

cccuugagca ucugacuucu ggcuaauaaa ggaaauuuau uuucauugc   589

<210> 144 <211> 2891 <212> DNA <213> Homo sapiens

<400> 144
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gctcccagca gcccccggcc cgcgctgccc gcactcctgg tcctgctcgg ggctctgttc   120

ccaggacctg gcaatgccca gacatctgtg tcccctcaa aagtcatcct gccccgggga   180

ggctccgtgc tggtgacatg cagcacctcc tgtgaccagc ccaagttgtt gggcatagag   240

accccgttgc ctaaaaagga gttgctcctg cctgggaaca accggaaggt gtatgaactg   300

agcaatgtgc aagaagatag ccaaccaatg tgctattcaa actgccctga tgggcagtca   360

acagctaaaa ccttcctcac cgtgtactgg actccagaac gggtggaact ggcacccctc   420

247

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ccctcttggc agccagtggg caagaacctt accctacgct gccaggtgga gggtggggca    480

ccccgggcca acctcaccgt ggtgctgctc cgtggggaga aggagctgaa acgggagcca    540

gctgtggggg agcccgctga ggtcacgacc acggtgctgg tgaggagaga tcaccatgga    600

gccaatttct cgtgccgcac tgaactggac ctgcggcccc aagggctgga gctgtttgag    660

aacacctcgg ccccctacca gctccagacc tttgtcctgc cagcgactcc cccacaactt    720

gtcagccccc gggtcctaga ggtggacacg caggggaccg tggtctgttc cctggacggg    780

ctgttcccag tctcggaggc ccaggtccac ctggcactgg gggaccagag gttgaacccc    840

acagtcacct atggcaacga ctccttctcg gccaaggcct cagtcagtgt gaccgcagag    900

gacgagggca cccagcggct gacgtgtgca gtaatactgg ggaaccagag ccaggagaca    960

ctgcagacag tgaccatcta cagctttccg gcgcccaacg tgattctgac gaagccagag   1020

gtctcagaag ggaccgaggt gacagtgaag tgtgaggccc accctagagc caaggtgacg   1080

ctgaatgggg ttccagccca gccactgggc ccgagggccc agctcctgct gaaggccacc   1140

ccagaggaca cgggcgcag cttctcctgc tctgcaaccc tggaggtggc cggccagctt   1200

atacacaaga accagacccg ggagcttcgt gtcctgtatg gcccccgact ggacgagagg   1260

gattgtccgg gaaactggac gtggccagaa aattcccagc agactccaat gtgccaggct   1320

tgggggaacc cattgcccga gctcaagtgt ctaaaggatg cactttccc actgcccatc   1380

ggggaatcag tgactgtcac tcgagatctt gagggcacct acctctgtcg gccaggagc   1440

actcaagggg aggtcacccg cgaggtgacc gtgaatgtgc tctccccccg gtatgagatt   1500

gtcatcatca ctgtggtagc agccgcagtc ataatgggca ctgcaggcct cagcacgtac   1560

ctctataacc gccagcggaa gatcaagaaa tacagactac aacaggccca aaaagggacc   1620

cccatgaaac cgaacacaca agccacgcct ccctgaacct atcccgggac agggcctctt   1680

cctcggcctt cccatattgg tggcagtggt gccacactga acagagtgga agacatatgc   1740

catgcagcta cacctaccgg ccctgggacg ccggaggaca gggcattgtc ctcagtcaga   1800

tacaacagca tttgggggcca tggtacctgc acacctaaaa cactaggcca cgcatctgat   1860

ctgtagtcac atgactaagc caagaggaag gagcaagact caagacatga ttgatggatg   1920

ttaaagtcta gcctgatgag aggggaagtg gtgggggaga catagcccca ccatgaggac   1980

atacaactgg gaaatactga aacttgctgc ctattgggta tgctgaggcc cacagactta   2040

cagaagaagt ggccctccat agacatgtgt agcatcaaaa cacaaaggcc cacacttcct   2100

gacggatgcc agcttgggca ctgctgtcta ctgaccccaa cccttgatga tatgtattta   2160
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248

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ttcatttgtt attttaccag ctatttattg agtgtctttt atgtaggcta aatgaacata   2220

ggtctctggc ctcacggagc tcccagtcca tgtcacattc aaggtcacca ggtacagttg   2280

tacaggttgt acactgcagg agagtgcctg gcaaaaagat caaatggggc tgggacttct   2340

cattggccaa cctgcctttc cccagaagga gtgatttttc tatcggcaca aaagcactat   2400

atggactggt aatggttcac aggttcagag attacccagt gaggccttat tcctcccttc   2460

cccccaaaac tgacaccttt gttagccacc tccccaccca catacatttc tgccagtgtt   2520

cacaatgaca ctcagcggtc atgtctggac atgagtgccc aggaatatg cccaagctat    2580

gccttgtcct cttgtcctgt ttgcatttca ctgggagctt gcactattgc agctccagtt   2640

tcctgcagtg atcagggtcc tgcaagcagt ggggaagggg gccaaggtat tggaggactc   2700

cctcccagct ttggaagggt catccgcgtg tgtgtgtgtg tgtatgtgta gacaagctct   2760

cgctctgtca cccaggctgg agtgcagtgg tgcaatcatg gttcactgca gtcttgacct   2820

tttgggctca agtgatcctc ccacctcagc ctcctgagta gctgggacca taggctcaca   2880

acaccacacc t                                                        2891


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<400> 145
ccccaccac ttcccctctc                                                   20



<210> 146 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 146
tgggagccat agcgaggc                                                    18



<210> 147 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 147
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<210> 148 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 148
tgcccatcag ggcagtttga                                                  20



<210> 149 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 149
gcccaagctg gcatccgtca                                                  20
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<210> 150 <211> 18 <212> DNA <213> Artificial <220> <223> Synthetic

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ctctctcaat ttggctct   18

<210> 151 <211> 33 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 151
aaagttttta aaaagtttga agtaaaagga gaa   33

<210> 152 <211> 14 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 152
ccccctttttg gggg   14

<210> 153 <211> 30 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 153
ccctatcttt aaagttttta aaaagtttga   30

<210> 154 <211> 74 <212> DNA <213> Artificial <220> <223> Synthetic

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tttaaaaagt ttga   74

<210> 155 <211> 15 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 155
cgcgcggaac gcgcg   15

<210> 156 <211> 16 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 156
cccgggtttt cccggg   16

<210> 157 <211> 20 <212> DNA <213> Artificial <220> <223> Synthetic

<400> 157
aggcgcacca atttggtgtt   20

<210> 158 <211> 1621 <212> RNA <213> Human immunodeficiency virus

<400> 158
ggucucucug guuagaccag aucugagccu gggagcucuc uggcuaacua gggaacccac   60

ugcuuaagcc ucaauaaagc uugccuugag ugcuucaagu agugugugcc cgucuguugu   120

250

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gugacucugg uaacuagaga ucccucagac ccuuuuaguc aguguggaaa aucucuagca      180

guggcgcccg aacagggacc ugaaagcgaa agggaaacca gaggagcucu cucgacgcag      240

gacucggcuu gcugaagcgc gcacggcaag aggcgagggg cggcgacugg ugaguacgcc      300

aaaaauuuug acuagcggag gcuagaagga gagagauggg ugcgagagcg ucaguauuaa      360

gcgggggaga auuagaucga uggaaaaaaa uucgguuaag gccaggggga aagaaaaaau      420

auaaauuaaa acauauagua ugggcaagca gggagcuaga acgauucgca guuaauccug      480

gccuguuaga aacaucagaa ggcuguagac aaauacuggg acagcuacaa ccaucccuuc      540

agacaggauc agaagaacuu agaucauuau auaauacagu agcaacccuc uauugugugc      600

aucaaaggau agagauaaaa gacaccaagg aagcuuuaga caagauagag gaagagcaaa      660

acaaaaguaa gaaaaaagca cagcaagcag cagcugacac aggacacagc aaucagguca      720

gccaaaauua cccuauagug cagaacaucc aggggcaaau gguacaucag gccauaucac      780

cuagaacuuu aaaugcaugg guaaaaguag uagaagagaa ggcuuucagc ccagaaguga      840

uacccauguu uucagcauua ucagaaggag ccaccccaca agauuuaaac accaugcuaa      900

acacaguggg gggacaucaa gcagccaugc aaauguuaaa agagaccauc aaugaggaag      960

cugcagaaug ggauagagug cauccagugc augcagggcc uauugcacca ggccagauga     1020

gagaaccaag gggaagugac auagcaggaa cuacuaguac ccuucaggaa caaauaggau     1080

ggaugacaaa uaauccaccu aucccaguag gagaaauuua uaaaagaugg auaauccugg     1140

gauuaaauaa aauaguaaga auguauagcc cuaccagcau ucuggacaua agacaaggac     1200

caaaggaacc cuuuagagac uauguagacc gguucuauaa aacucuaaga gccgagcaag     1260

cuucacagga gguaaaaaau uggaugacag aaaccuuguu gguccaaaau gcgaacccag     1320

auuguaagac uauuuuaaaa gcauugggac cagcggcuac acuagaagaa augaugacag     1380

caugucaggg aguaggagga cccggccaua aggcaagagu uuuggcugaa gcaaugagcc     1440

aaguaacaaa uucagcuacc auaaugaugc agagaggcaa uuuuaggaac caaagaaaga     1500

uuguuaagug uuucaauugu ggcaagaaag ggcacacagc cagaaauugc agggccccua     1560

ggaaaaaggg cuguuggaaa uguggaaagg aaggacacca aaugaaagau uguacugaga     1620

g                                                                     1621


<210>  159 <211>  1771 <212>   RNA <213>   Human immunodeficiency virus

<400>  159
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251

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agcuggacug ucaaugacau acagaaguua gugggaaau ugaauuggc aagucagauu      60

uacccaggga uuaaaguaag gcaauuaugu aaacuccuua gaggaaccaa agcacuaaca     120

gaaguaauac cacuaacaga agaagcagag cuagaacugg cagaaaacag agagauucua     180

aaagaaccag uacauggagu guauuaugac ccaucaaaag acuuaauagc agaaauacag     240

aagcaggggc aaggccaaug gacauaucaa auuuaucaag agccauuuaa aaaucugaaa     300

acaggaaaau augcaagaau gaggggugcc cacacuaaug auguaaaaca auuaacagag     360

gcagugcaaa aaauaaccac agaaagcaua guaauauggg gaaagacucc uaaauuuaaa     420

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aaaaauaaau acaacacacc caaauacagg augauaguuc gugugacaaa cagagauauc    180

auuugucaga uugcuuaugc ccguauagag ggggauauga uagucugcgc acguuaugca    240

cacgaacugc caaaauaugg ugugaagguu ggccugacaa auuaugcugc agcauauugu    300

acuggccugc ugcuggcccg caggcuucuc aauagguuug gcauggacaa gaucuaugaa    360

ggccaagugg aggugacugg ugaugaauac aauguggaaa gcauugaugg ucagccaggu    420

gccuucaccu gcuauuugga ugcaggccuu gccagaacua ccacuggcaa uaaaguuuuu    480

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ccugguuaug auucugaaag caaggaauuu aaugcagaag uacaucggaa gcacaucaug    600

ggccagaaug uugcagauua caugcgcuac uuaauggaag aagaugaaga ugcuuacaag    660

aaacaguucu cucaauacau aaagaacagc guaacuccag acaugaugga ggagauguau    720

aagaaagcuc augcugcuau acgagagaau ccagucuaug aaaagaagcc caagaaagaa    780
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266

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cggccagaag ccaguagucc gggagcgugg acccuauguc uacagggagu ucagacaaaa   180

ggucaacauc accuucaaug acaacgacac cguguccuuc guggagaacc gcagccucca   240

uuuccagccu gacaagucgc auggcucaga gagugacuac auuguacugc cuaacaucuu   300

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gugggcuau gacgauccu ucgugcauuu ucucaacacg uaccucccag acaugcuucc   480

cauaaagggc aaauuuggcc uguuuguugg gaugaacaac ucgaauucug gggucuucac   540

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cgggcaaaca gggaagaucg agccaguagu ucugccguug cugugguucg aacagagcgg       1140

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ccugauagcu uggucagacc agccacccag ucccuacacc cgcuucuug aggacucucu       1500

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ucaccgucau cagcaucgac cgguaccucg ccaucguccu ggccgccaac uccaugaaca   240

accggacagu gcaacacggc gucaccauca gucugggcgu cugggcggcg gccaucuuag   300

uggcgucgcc ccaguucaug uucacaaaga gaaaggacaa cgaauguuug ggugauuacc   360

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cgacucuacu aagaacccag aguuccugca ucugacucug uguaaugaaa acagauucac   960

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cugcccucug gauggcggca uccagcuacg aaucuccgac caccacuaca gcaagggcuu   180

caggcaggcc gcgucaguug uuguggccau ggacaagcug aggaagaugc ugguucccug   240

cccacagacc uuccaggaga augaccugag caccuucuuu cccuucaucu uugaagaaga   300

accuaucuuc uucgacacau gggauaacga ggcuuaugug cacgaugcac cuguacgauc   360

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cuuuguacaa ggagaagaaa guaaugacaa aauaccugug gccuugggcc ucaaggaaaa   540

gaaucuguac cuguccugcg uguugaaaga ugauaagccc acucuacagc uggagagugu   600

agaucccaaa aauuacccaa agaagaagau ggaaaagcga uuugucuuca caagauaga   660

aaucaauaac aagcuggaau uugagucugc ccaguucccc aacugguaca ucagcaccuc   720

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aaccacggcc acauuugguu cuaagaaacc cucugucauu cgcucccaca uucugaugag   1140

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273

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275

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ucuuggagca auccggggua gugccuaaac gcauuucuuc aacgu   165

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ugauccaauu ucgccggcgu acggccacga ucgggagggu gggaaucucg ggggucuucc   180

gauccuaauc caugaugauu acgaccugag ucacuaaaga-tgauggcaug augauccggc   240

gaug   244